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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/550,259

09/21/2005

Masahiro Hagiwara

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EXAMINER

NAKARANI, DHIRAJLAL S

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

08/13/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/550,259	Applicant(s) HAGIWARA ET AL.	
	Examiner D. S. Nakarani	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 9-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 9-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-5 and 9-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, line 15, the phrase "dispersion stabilizer" lacks clear antecedent basis. No "dispersion stabilizer" has been previously recited. Therefore limitation can not be understood. The phrase "dispersion stabilizers" has been previously recited in lines 3-4 and line 12 of claim 1. Therefore it is not clear whether the phrase "dispersion stabilizer" in line 15 refers to the phrase "dispersion stabilizers" or something else.

Line 15, the phrase "the content of the dispersion stabilizer is from 0.02 to 20% by weight" renders claims in definite and confusing. It is not clear from the claim language whether recited amount of dispersion stabilizer applies to each recited three dispersion stabilizers or to a mixture of the recited three dispersion stabilizers. Clarification and/or correction requested.

Claim 5 depends from claim 1, which requires dispersion stabilizers comprise a chelate, an organic acid, and a phosphate ester-based compound. How does the limitation "the dispersion stabilizer is a compound having at least one selected from the group consisting of nitrogen, phosphorus, and chalcogen atoms" in claim 5, lines 3-4, further limits subject matter of claim 1? Clarification requested.

4. Claims 1-5 and 9-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kondo (U. S. Patent 6,329,061 B2) in view of Kobata et al (U. S. Patent 6,673,456) and Mont et al (U. S. Patent 4,027,069).

Kondo discloses a dispersion comprising tin doped indium oxide, plasticizer such as triethyleneglycol-di-2-ethylbutyrate, polyvinyl butyral resin dissolving organic solvent such as ethyl alcohol (i.e. ethanol), propanol, butanol etc. and polyvinyl butyral resin. Kondo discloses an interlayer formed using the dispersion and a glass laminate formed using the interlayer (Col. 7, line 5 to col. 8, line 10). Kondo also suggest addition of other additives to the dispersion (Col. 7, lines 15-16). Kondo fails to identify other additives such as adhesion control agent, chelate, organic acid, sulfate ester based compound, phosphate ester-based compound etc.

Kobata et al disclose a dispersion of tin doped indium oxide particles having particle diameter raging from 10 to 80 nm (Col. 8, lines 45-56), plasticizer or solvent, chelate, organic acid, dispersion stabilizer, polyalcohol surfactant and adhesion control agent (Col. 8, line 57 to col. 19, line 20 and Examples). Kobata et al suggest organic solvent which dissolves resin (Col. 14, lines 60-61). Kobata et al disclose an interlayer formed using the dispersion and a glass laminate formed using the interlayer. Kobata et al's chelate (Col. 9, lines 12-25), organic acid (Col. 9, lines 60-65), a phosphate ester-based compound (Col. 11, lines 14-24) encompasses claimed chelate, organic acid and claimed phosphate ester based compounds. The polyvinyl butyral resin used in the dispersion encompasses claimed polyvinyl alcohol since polyvinyl butyral resin made by acetalizing polyvinyl alcohol and has some residual polyvinyl alcohol.

The claimed properties of the dispersion specifically no disclosed are deemed to be inherent properties. In an event, those properties not inherent, a person of ordinary skill in the art can optimize dispersion to prevent agglomeration of tin doped indium oxide particles since

Art Unit: 1794

ordinary skill in the art is aware of light scattering due to large particle size (Kobata et al , col. 8, lines 5-13).

Mont et al disclose an interlayer and a glass laminate made with the interlayer. Mont et al's interlayer comprises: polyvinyl butyral resin, plasticizer and buffer. Mont et al's interlayer has improved oxidation resistance and, color and viscosity stability. Mont et al's buffer includes phosphate ester such as ethyl acid phosphate (i.e. triethyl phosphate) (Col. 3, lines 24-50, specifically line 28 for ethyl acid phosphate).

Therefore it would have been obvious to a person of ordinary skill in the art at the time of this invention made to utilize disclosure of Kobata et al and Mont et al in the invention of Kondo to utilize additives disclosed by Kobata et al to make the dispersion containing tin-doped indium oxide fine particles, a plasticizer, an organic solvent which dissolves interlayer forming resin, chelate, an organic acid and phosphate ester based compound for viscosity and color stability; interlayer and the glass laminate with desired properties.

5. Applicant's arguments with respect to claims 1-5 and 9-26 have been considered but are moot in view of the new ground(s) of rejection.

6. The Declaration of Masahiro Hagiwara pursuant to 37 C.F.R. 1.132 has been considered. However the declaration does not commensurate with the scope of claims.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. S. NAKARANI whose telephone number is (571) 272-1512. The examiner can normally be reached on Monday-Friday.

Art Unit: 1794

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie E. Shosho can be reached on (571) 272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/D. S. Nakarani/
Primary Examiner, Art Unit 1794**

DSN
August 12, 2009.